

Organizational dimensions of decentralized forest management: lessons from a farmers' cooperative in central Mexico

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Are local organizations prepared – in their processes, structure and culture – to face the challenges devolving to them when forest management is decentralized?

In recent decades, it has been increasingly recognized that centralized forest management regimes have often failed to manage resources in a sustainable way because they have been rigid (Westley, 1995; Holling, 1973, 2000) and have deprived local people of the motivation to use and manage resources in a sustainable way (Ponting, 1991; Scott, 1996). As a result, policy-makers have begun to orient institutional change towards local, small-scale management – variously referred to as “decentralization”, “local devolution” (FAO, 2000) and “community-based management” (Agrawal and Gibson, 1999) – as a promising avenue for sustainable forest management. Local schemes, it is argued, have the potential to realize the three interconnected pillars – economic, social and environmental – of sustainable forest management. Increased economic value creation from improved resource management, combined with local participation in decision-making and benefit-sharing, would increase the incentives to manage forests in a sustainable way.

This article aims to shed some light on the local processes involved in implementing natural resource management decentralization, through a study of a farmers' cooperative (*ejido*) in a forested municipality in central Mexico. *Ejid*os are farmers' cooperatives established under land reforms following Mexico's revolution of 1910; they are similar in design and structures to the *bienes comunales* that date from before the land concentration of the late nineteenth century.

The article focuses on two specific

areas. The first is how institutional change – often resulting from policies or decisions crafted at the provincial, national or international level and guided by broad philosophies and ideas – is translated into rural and village-based processes on the ground. The second is the temporal transition from long-standing centralized management regimes to decentralized ones. Scott (1996) suggested that several countries in the twentieth century implemented “modernist” management schemes to intensify resource management and extraction by focusing on a single use of the resource base (as opposed to several uses) and by limiting the involvement of local people in management decisions and benefits. He contended that “modernist” centralized management schemes lead to the weakening of local capacities when applied over a long period, because they tend to constrain local communities and deprive them of incentives to manage forests well. This article examines the transition from such a centralized to a decentralized regime as experienced at the local level, from the perspective of a local organization. It examines how a local group has begun to organize management in a decentralized context and how it deals with challenges in a context that is more demanding of local initiative.

An organization is defined here as a group of people who have stable patterns of interaction, share overarching common goals and collaborate on a stable and regular basis to achieve these goals (Mintzberg, 1983). As such, organizations represent loci for collective action and decisions affected by decentrali-

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zation. In the context of decentralized forest management, such organizations can include, for example, cooperatives, community-based organizations, for-profit/commercial organizations, professional organizations and public (municipal, state or provincial, national and international) organizations.

The article is based on a seven-month study of an *ejido* that covers more than 90 percent of the forest area in a municipality in central Mexico (in which there are also four other *ejidos*). Established in 1934 by presidential decree, the *ejido* currently has 162 *ejidatarios* or farmers, 196 ha of land for cultivation and 9 825 ha of forest (UAM, 2000). Membership has mainly been hereditary; as of 2005, all but ten *ejidatarios* are descendents of *ejido*'s founding members. The study comprised 83 interviews, observations of meetings and extensive analysis of archival and contemporary written data (Raufflet, 2005).

After describing the geographical, historical and economic context, the article highlights the organizational challenges raised by decentralization and the readiness of the *ejido* to take up these challenges. The conclusions suggest some lessons to be learned from the study and implications for researchers, policy-makers and practitioners of decentralized forest management.

BACKGROUND

The municipality of the study comprises 12 000 ha in the foothills between the Basin of Mexico and the forested mountain range of the Sierra Nevada in Central Mexico. Its altitude ranges from 2 600 to about 4 500 m. While most human settlements are located in the lowest part of the municipality, forests are located

on 10 000 ha in the highest area. This span has also affected a large part of its history. Concerns for the sustainable management of local forest resources in the colonial era go back as far as 1579 (Simonian, 1995).

Historical context

At the end of the nineteenth century, as Mexico began to industrialize, the region in question attracted a pulp and paper company interested in easy access both to resources – water and timber – and to the main national market – the metropolis in the Basin of Mexico. Between 1890 and 1991, the company dominated the local spatial and institutional landscape, as well as local forest management. At the turn of the twentieth century, governments interested in national industrialization conceded local forest resources to the company, ensuring it a steady supply of timber (Huerta Gonzalez, 1994; Barreto Flores, 1998).

In 1947, as part of a national industrialization strategy, a presidential decree further strengthened the role of the pulp and paper company in forest management in this region. It imposed scientific forestry methods which heightened the role of

engineers, and strictly regulated farmers' involvement in decision-making and rewards from logging. The presidential decree also obliged *ejidos* to participate in the system for the division of labour, as they could only legally use timber themselves if the factory did not need it – an extremely rare occurrence.

The 1947 presidential decree also largely determined the economic dimension of local forestry. By requiring the *ejido* to collaborate with the company, the decree considerably restricted the *ejidos*' ability to obtain benefits from the forests. The official monopoly sanctioned by the decree formally obliged *ejidos* to sell timber exclusively to the company according to financial terms set by the Secretary of Agriculture.

Thus the legal, technical and economic regulations established under the 1947 presidential decree limited the *ejidos* to a position of compliance to the management regime. The decree made any forest uses unrelated to the industry's needs illegal. It valued technical solutions in forest management and gave company engineers decision-making roles while confining farmers to implementation roles. Although the industry created an



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The site of the study of decentralized forest management, a municipality in Central Mexico at 2 600 to 4 500 m altitude, with forests located on 10 000 ha in the highest area



New federal laws providing for community management allow forest holders to extract timber and create economic value from forest products, encouraging ejido members to become forest entrepreneurs

enclave of prosperity in the region by providing employment to several hundred workers, the decree prioritized the factory's economic interests over those of the farmers, depriving farmers of economic incentives for maintaining the forests and gradually reducing the proportion of their income earned from forest-related activities.

The era of centralized forest management dominated by the pulp and paper company ended in 1991. For financial reasons, the factory closed in June 1991, reopened two months later, and then withdrew from forest management. It no longer uses timber from local sources.

A new era: national changes, local opportunities and challenges

In 1996 and 2002, new federal laws provided new prospects for the *ejidos* to manage their forests, shifting from a tradition of centralized, top-down approaches to decentralized, community-based management schemes (Simonian, 1995; Simon, 1996). This shift has transformed Mexico into the "world's largest experiment in community based forest management" (Alcorn and Toledo, 1998), with some 70 percent of forests in Mexico held by *ejidos* and *bienes comunales*. The new forestry law (UAM, 2000) allows forest holders to extract timber and create economic value from forest products under the technical supervision of accredited forest engineers. The 1996 and 2002 forest laws encourage *ejido* members to "shift from

subsistence farmers to forest entrepreneurs" (Escalante Semerena and Aroche Reyes, 2000).

For the forest-rich *ejido* examined in this study, local opportunities for value creation under the new legislation are significant. It has a large potential market for timber and agricultural products and for ecotourism-related services in the metropolitan area (UAM, 2000).

At the same time, as an organization that has represented the local community since the 1910–1920 revolution, the *ejido* has responsibilities for the sustainability of local ecosystems, which are threatened at all altitudes. The glaciers on a nearby 5 000 to 5 300 m volcano are threatened by the combined effects of global warming and urban atmospheric contamination: two of the eight glaciers have melted since the 1980s, decreasing the amount of water available downstream (Chávez Cortes and Trigo Boix, 1996). The fragile high-altitude ecosystems (4 000 to 5 000 m) around the volcanoes are also under serious environmental stress, as the lack of monitoring and failure to enforce environmental regulations have allowed wide-scale biophysical degradation (Vargas, 1998). In lower areas (2 500 to 4 000 m), around 85 percent of the soils are classified as "very or extremely unstable" and need permanent forest cover, while the remaining 15 percent are prone to moderate or acute erosion (UAM, 2000). Illegal logging by organized groups has also spread in these areas.

HOW READY IS THE *EJIDO* TO TAKE UP THE CHALLENGES?

In the study described in this article, the *ejido*'s organizational capacity was evaluated by a simple framework that involved looking at three general components of an organization: its process, structure and culture. The organizational process comprises daily interactions among people around issues such as making decisions and getting things done. The organizational structure comprises the set of rules and roles that people adopt within the organization. The organizational culture comprises people's stated and unstated values and their ways of seeing themselves and the world around them, as widely shared by the organization.

Organizational process and decision-making

In the short term, the main collective decision-making body within the *ejido* is the assembly: decisions are made according to the will of the majority. In the post-revolutionary era, this design parameter was intended to enhance participation and formal democracy. However, there is evidence that it has often resulted in suboptimal decision-making. Decisions on issues common to the whole *ejido* are often biased by an overall short-term focus and by the strong or dominant influence of a limited number of especially powerful members.

The pattern of the decision-making process in the organization seems to be stuck in a vicious circle. As mentioned above, from 1947 to 1991, the industry-dominated forest management provided few incentives for farmers to become involved in forest management issues, and they drew most of their livelihood from agricultural activities (growing crops and raising animals). As a result, farmers engage in very limited ways in the decision-making processes of the *ejido* and tend to prefer short-term limited benefits over less secure long-term ones.

The low level of involvement in collective decision-making has allowed individual groups to become particularly influential within the *ejido*, and has led to limited accountability to the rest of the *ejido*. The low level of accountability has opened the door for a pattern of damaging practices – including corruption, personal enrichment and collusion with external actors. These poor practices have further reduced returns to *ejidatarios*. In this process, the low accountability of the leaders to the rest of the community and the low interest of the other members in *ejido* affairs are mutually reinforcing.

Over the long term, repeated poor decisions have led to self-perpetuating failure loops. The often ineffective organizational process has resulted in suboptimal decisions on the allocation of resources and election of leaders, which have led, over decades, to a lack of trust.

The election and performance of the previous nine *ejido* presidents illustrate the weaknesses in this decision-making process. Only one of the nine presidents finished his three-year term and is remembered as honest. Two were re-elected despite poor management records in their first term, and despite campaign promises of improved behaviour, in both cases the poor practices continued during their second term.

Organizational structure

Structural features of the *ejido* and the land tenure system dating from the time of land reform were designed to protect

farmers and enhance community management.

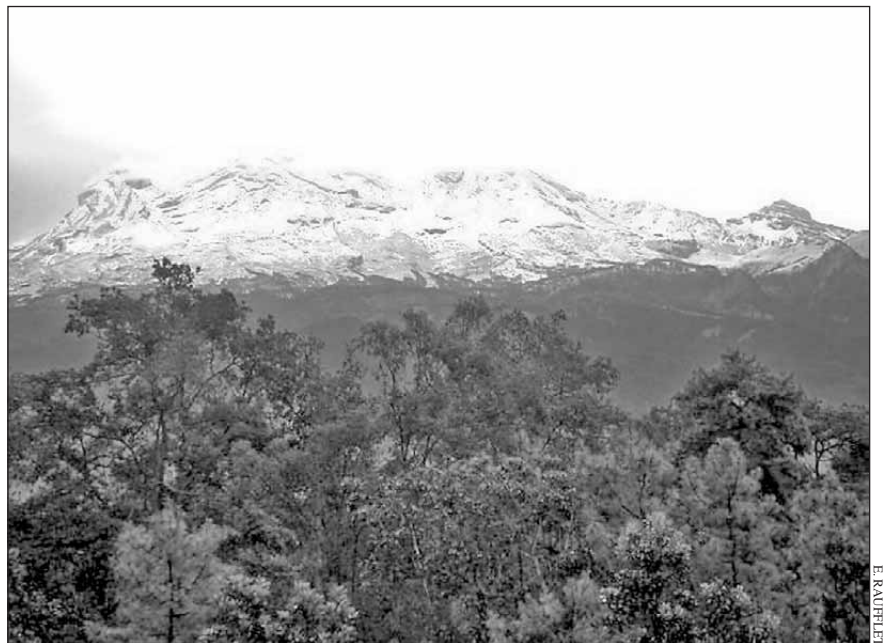
- **Land tenure system.** Land had been allocated to the *ejido* as inalienable and conditional. Inalienability was intended to protect farmers from selling off their plots under pressure, while conditionality aimed to protect the Mexican nation's interests in the land. However, owing to the conditional status of property rights – which had been applied especially in the forested areas for environmental reasons in the 1930s, and for economic and industrial reasons from 1947 to 1991 – the *ejidatarios* expressed a sense of insecurity and demonstrated a lack of interest in the land, as they have had limited opportunity to invest to increase productivity.
- **Decision-making system.** The central role given to the assembly in making decisions was designed to encourage a democratic culture. Yet, there is evidence that the *ejido* faces governance challenges, as several leaders have reportedly been involved in repeated, large-scale personal enrichment schemes at the expense of the *ejido*. These abuses could have

been prevented had relatively simple accounting procedures been in place.

- **Membership.** *Ejidatarios* were to serve the social and economic development of their community. However, the *ejido* comprises 162 members of a current municipal population of 35 000, and other members of the community wonder how 0.5 percent of the population can claim to represent the whole community based on decisions made in 1934. One non-*ejidatario*, for example, referred to “a divorce between the *ejido* and the local community” and expressed resentment that most decisions with a bearing on the environmental future of the municipality belonged to an assembly in which the non-*ejidatarios* had no say.

Organizational culture

The *ejido* is characterized by mistrust and powerlessness. The high level of mistrust among *ejidatarios* has led to a narrow demographic composition: most *ejido* members are over 70 years old and have lived all their lives in the municipality, and almost all are male. There is



The ejido (farmers' cooperative) has responsibilities for the sustainability of local ecosystems, which are threatened at all altitudes

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little tolerance for diversity, divergence or outsiders, even if they are relatives. This lack of diversity is one of the reasons why children of the *ejidatarios* lose interest in the *ejido* and leave the land allotment to go to Mexico City in search of better opportunities.

Most *ejidatarios* interviewed in the study referred to their experience with the *ejido* as a negative one in which they felt powerless *vis-à-vis* their leaders, the industry (in the past) and the organizational dynamics.

CONCLUSIONS AND IMPLICATIONS FOR RESEARCHERS, POLICY-MAKERS AND PRACTITIONERS

In summary, the *ejido*'s volatile organizational process has led to the reproduction of a suboptimal process and a pessimistic organizational culture focused on the short term. The organizational structure is therefore ineffective overall. Because of the particular combination of organizational process, structure and culture, the *ejido* is ill prepared to face the new challenges related to entrepreneurship and value creation in forest management, and the environmental challenges arising in this new context.

Although some features of this local community-based organization may resemble other situations in Mexico's *ejidos* (see Álvarez-Icaza *et al.*, 1993; Warman, 2001, 2003), a single study cannot be claimed to be generic. Nevertheless, this study offers interesting insights for researchers, policy-makers and practitioners.

Implications for researchers and policy-makers

Much research on institutional change related to decentralization and devolution of forest management-related decisions to local communities has dealt with forest management institutions. Setting up institutions represents an indispensable stage in moving towards more participatory, sustainable locally based forest management. However, this study suggests that while institutional change is necessary for creating the conditions and context for local empowerment, it might not be sufficient for its successful implementation on the ground, especially in the shift from centralized to decentralized management.

The study suggests that researchers and policy-makers could gain interesting insights on forest management by examining in detail organizations that implement changes on the ground, using a simple three-dimensional framework to analyse organizational processes, structure and culture.

In addition, the study focused on the extent to which a single community-based organization is able to address current challenges of value creation and prevention of environmental degradation. Examination of how organizations

can build capacities to shift from a centralized to a decentralized context is an area for future research.

In particular, the study identified one of the main challenges for this specific *ejido* as its lack of internal capacity to make decisions, to learn from past experiences and to evolve and acquire technical knowledge relevant for forest management. In the new, decentralized context, this weakness represents a significant obstacle to reaping current economic opportunities and solving local environmental and social problems. New rules may not have been enough to move the organization beyond the patterns of relations left behind by decades of centralized forest management. Policy-makers should recognize that organizations often represent important loci for collective action and that strengthened organizations could enhance implementation of new decentralized policy. Policy-makers would be recommended to evaluate the degree of readiness displayed by local organization for making policies, and to dedicate substantial resources to building organizational capacities.

Building organizational capacities involves, among other things, strengthening organizational competencies to make well-informed, environmentally

Decentralization policies may put pressure on local organizations, participatory processes, decision-making and collective actions for value creation and prevention of environmental degradation (shown, reforestation workers in the study area)



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sound, technically solid and participatory decisions, and to manage the collective process. Decentralization policies pertaining to forest management may set up expectations and put significant pressure on local organizations, participatory processes, local decision-making and local actions. Dedicating insufficient attention and resources to these organizations will lead to unexpected or disappointing policy outcomes on the ground. ♦

Implications for practitioners

Much attention has been paid to the technical dimensions of forest management, but less to its organizational dimensions. An important part of how technical knowledge is translated into action on the ground depends on the organization's ability to make it happen. This study points to the value for practitioners of enhanced awareness of organizational capacities. The purpose of this article is to raise these issues to contribute to the realization of the potential of community-based forest management. ♦



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